Introduction

This collaborative project was designed to use action research to assess and advocate for innovative design changes in a school library. The high school library was in its fifth year of service, and yet the layout of the library was not meeting the learning and technological needs of 21st-century high school students.

The purpose of the codesigned study was to create a more useable space and make the school library an indispensable part of the school. The school librarian realized the configuration of the library was outdated and not conducive to the prolific use of technology in the school. However, due to the relatively new construction of the library and high school, the librarian believed support within her school community was necessary to make any changes to the existing space.

Ohio, like many other states, has experienced declining state support of education, and many schools have closed libraries and eliminated school librarian positions.

In 2006 the Hilliard City Schools library program received the AASL National School Library Program of the Year Award for its superior teaching, resources, and services. The district had fulfilled award criteria with employment of a licensed school librarian in each of its twenty-one buildings.

Times have changed and library services have been curtailed, with the elementary librarians serving two buildings, the loss of assistants at the middle school, and the loss of a second librarian at each of the high schools. These changes helped to precipitate the need for an action research plan before beginning any

change. A suburban school district with over sixteen thousand students, Hilliard is considered an "excellent" district according to the Ohio state report card. However, the district has faced cuts to its budget, a circumstance that has adversely affected school library programs and services.

All librarians must systematically and continuously meet the challenges of an increasingly digital online world. To prioritize and manage their resources, school librarians must assess the relevance and provision of library resources and services. Action research is a natural fit for systematically evaluating and documenting thoughtful improvements in school library programs. These activities enable school librarians to demonstrate and share their value, garner support, and advocate for their role in the academic achievement of students. Advocacy for school library programs has become essential.

In the Hilliard Bradley High School, gathering supportive data and documenting input was viewed as critical to enable the school librarian to make changes to the high school library's physical space. The librarian, although not new to the district or the field of school librarianship, inherited the newly designed high school library physical space and was reluctant to request alterations or additions to the space and existing resources without justification.

Collaboration and Partnership

The collaboration in this action research project was a natural progression of ongoing dialogue and partnership between Liz, the librarian at the high school, and Meghan, the faculty coordinator of

the school library media program at Kent State University. Participation and active engagement of both parties in the state-wide school library professional organization, Ohio Educational Library Media Association (OELMA), the state AASL affiliate, inspired the foundation of collaboration and, ultimately, friendship. Attendance at conferences, presentations, and professional development venues spurred conversations and led to other collaborative endeavors such as copresentations; sharing of resources, information, and expertise; and the hosting of Kent State school library practicum students within the Hilliard district. In winter 2013 Meghan conducted a professional development workshop for OELMA: Savvy School Library Design to Facilitate 21st-Century Literacy Skills and the Common Core. The workshop sparked dialogue and was the seed that grew into the collaborative project described here. Meghan's background as a K-12 school librarian and administrator and her experience with school facility renovation, technology integration, management, and advocacy at the district level-combined with current research and publication on evaluation of school libraries-made her a willing and interested partner to investigate the innovative design. Her experience with researchdesign methodology and access to a university-funded online survey tool were advantageous as well.

Context

The library space was originally designed for students working individually; it was not the innovative learning space needed to best meet the needs of students who visited the school library to work collaboratively and to use multiple forms of handheld technology.

The action research project sought to gather input from high school faculty members and students about improving school library usage, availability of resources, and providing opportunities for collaborative learning using a variety of technology. School librarian Liz's goal was to transition the space considered a "media center" or "school library" into an "innovative learning center." Another goal of the project was to identify need for additional spaces such as a makerspace or high-tech production space.

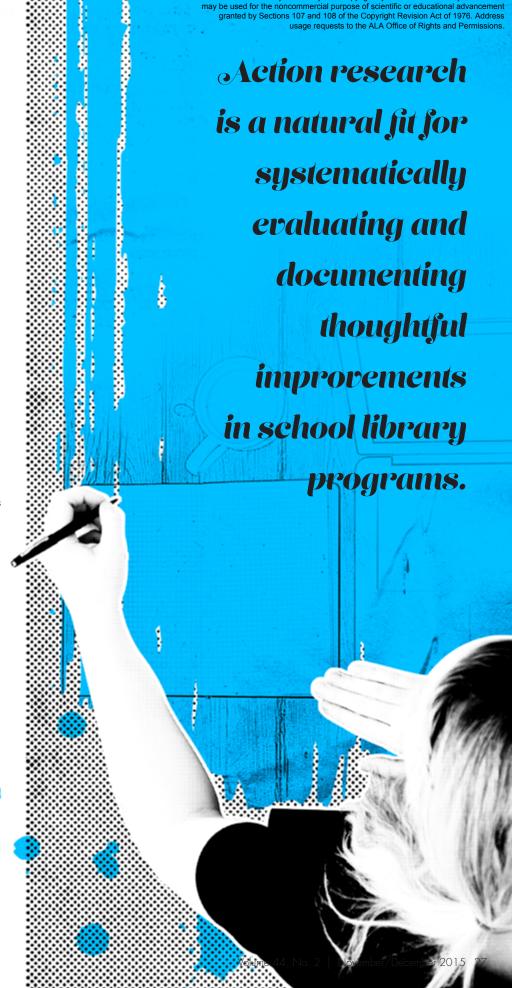
Why Action Research

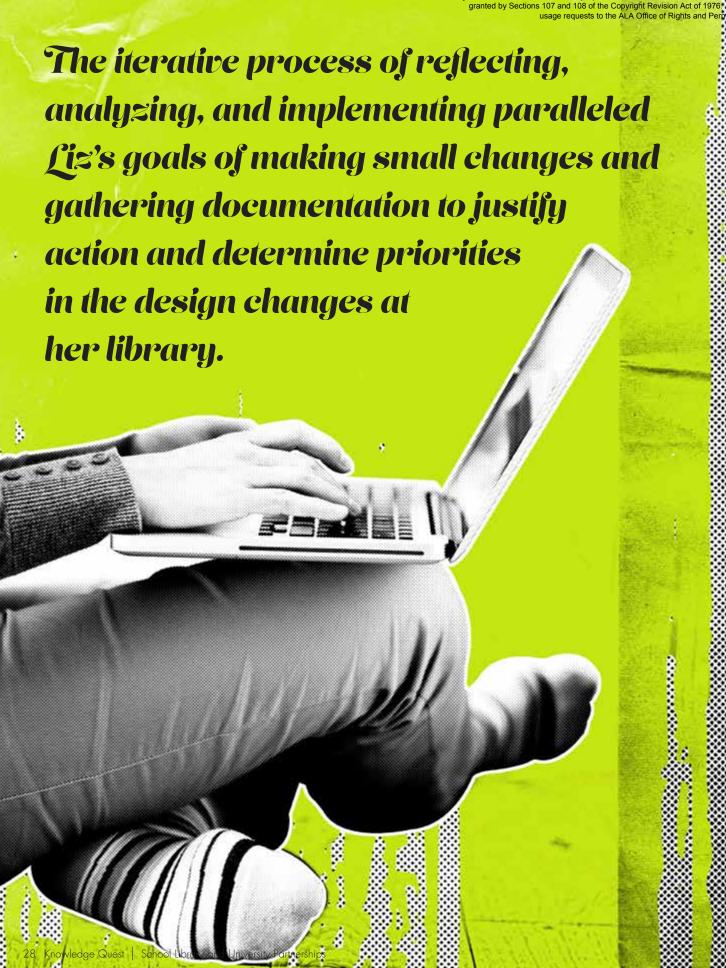
As noted by researchers Jody Howard and Su Eckhardt, "The action research method of problem solving is a continuous process, a spiral that lets the librarian reflect on a problem, analyze the problem through the collection of data, implement an improvement to that problem, and then begin the process all over again: Reflect, Analyze, Implement" (2006).

The iterative process of reflecting, analyzing, and implementing paralleled Liz's goals of making small changes and gathering documentation to justify action and determine priorities in the design changes at her library. Action research was determined to be the best methodology to investigate the design issue because inherent in action research is a cyclical progression of evaluation and improvement.

Research Process

A three-tiered data-gathering approach of structured observation, surveys, and focus groups was established to document and provide context to analyze results from the surveys of teachers and students. The structured





observation and documentation were developed to identify and categorize students' and teachers' use of technology and resources within the library, traffic patterns within the library, and requests made by students and teachers, and to note the predominant activities within the library throughout the school day.

The online survey was codesigned and launched using Qualtrics software. (Kent State University currently subscribes to Qualtrics services.) Qualtrics is a leading technology-service company that provides services for use in both market research and in academic institutions nationwide. The survey design and project were approved by the University Research Internal Review Board.

All of Meghan's graduate courses include instructional modules on evaluation and assessment. She incorporates opportunities for graduate students to apply action research methodology to issues and topics discussed in her courses. These instructional resources provided the framework for the action research project described here. The step-by-step action plan was adopted from Sharon Burger and Mary Ann McFarland's article "Action Research and Wikis" (2009).

Burger and McFarland's action plan steps are listed below. The statements reflect the recommended steps; the clarifying questions were added by the authors while developing the project plan. The italicized text briefly describes how the step was done at the high school library being studied.

1. Identify the purpose of study and problem statement.

What are the issues in your library?

The issues at the high school were determined via structured observation and dialogue. These initial thoughts and observations became the basis for the development of the survey questions.

2. Collect background information on topic based on problem statement.

What has caused the problem? What information needed to be gathered to frame the scope of the problem? What is the context of the issue? What qualitative methodology could be implemented to gather needed information and data to inform the action research process and design?

Data gathered through informal analysis, observation, and anecdotal responses captured by the librarian enabled the researchers to identify the scope of the design issues. This data informed the development of the surveys that were used to identify facility issues that needed to be addressed.

3. Review current literature on this topic.

What are possible sources of information? Innovative learning spaces were the overarching topic; what subtopics informed the librarian's thinking about this issue?

The current emphasis on makerspaces, the school library as a learning commons, and the critical need for advocacy were discussed and investigated.

4. Formulate questions based on problem statement.

What information do you need to gather?

This step was critical in determining the focus of the surveys. Survey questions were designed both to gather new information and to support observations made by the school librarian during the structured observation.

5. Collect data from more than one source (triangulate data).

Who (library stakeholders) should be involved? How will you find out? Best sources of information to be gathered in your setting? Other appropriate assessment tools?

Liz, the school librarian, determined that students and teachers should be surveyed and that an informal meeting with the building administrator would also serve as a data source. One of the key points of this step was to determine if other assessment practices were already in place and if existing resources could be tapped to provide more contextual data. Liz identified several sources of existing assessment data to tap. Data gathered from her integrated library system included circulation records for specific categories of resources; the automated attendance system tracking library visits also provided statistical data.

To identify gaps in the current library learning space and to solicit ideas for a more innovative collaborative space for learning, Liz and Meghan codesigned and launched two online surveys: one for students and one for faculty.

After the faculty survey had been created, a link to the anonymous survey was sent to faculty members via e-mail. The student survey was shared by means of the computers students used to sign into the library; every student who visited the library had to use that site. Adding one more step to the sign-in process was easy. Each survey consisted of ten questions that paralleled those asked of teachers, e.g., "What kind of space would you like to see created in the school library?"

6. Organize data.

What reports and charts would be useful? What issues, factors, and variables have emerged in this initial data gathering? What data could be gathered at your setting and how would the information be most effectively presented?

In this step, dialogue centered on how data gathered in step 5 could be presented and what data would be most effective in communicating the value of the library and connecting with library stakeholders.

7. Interpret data.

What are commonalities among data results? Disconnects? What do you think will be found? Predictions?

During this stage, all available data was evaluated; observations, survey data, notes from meeting with administrator, and follow-up informal focus-group meeting notes were compared.

8. Draw conclusions and plan for future.

What additional questions were unanswered or emerged during the action research study? How can the information be used to inform school library initiatives and education? Build awareness? Create change? Identify connections to overall library or institution service?

Addressing these questions focused attention and dialogue on identifying gaps or unanswered questions that remained from the initial investigation stage. Dialogue also focused on what was learned and how this information could be shared with stakeholders and used to demonstrate value of the school library program.

9. Start process again with new information.

What have you learned from the process? Implications for the future? What do you hope to learn from evaluating the use of your library?

This critical step focused on future plans for gathering more data, sharing with key stakeholders the results of the initial phase of the action research project, and, specifically,

looking at setting up the second phase of "reflect, analyze, and implement."

Findings

Results of the initial survey findings inspired changes (described in the next subsection) that resulted in increased student usage and affirmed the importance of the school library program in the learning process. The action research project enabled Liz to fulfill the roles of program administrator, instructional partner, and leader in her school.

The surveys also demonstrated the value of the school library program and library services.

Several interesting items surfaced because of the survey. First, there was clarification about how students currently used the school library; the vast majority used it as a place to use the desktop computers to complete schoolwork. While many had smartphones, they preferred the library's technology. In response to a survey question about number of visits to the library, many indicated that they visited two or more days a week, and more than a few indicated that they visited daily. When students were asked what type of learning spaces they wanted, two types of work spaces were preferred: one designed for collaboration and one designed for quiet independent work. All students suggested more power outlets for technology. A small number of students responded positively to the idea of having minilessons available throughout the year, focusing on new technologies. It was gratifying to find that one of the noteworthy or "best" aspects of the library was considered to be the library staff. Liz and her assistant strive to ensure the library is an inclusive and welcoming environment. Both assert that students know library staff members

are there to provide any type of academic support necessary for students' academic success. More than one student stated that the school library was the respondent's favorite place in the building!

An unintended result of the survey was illuminating how school faculty perceived the school library and the librarian's role in the learning process. While Liz was concerned that her services were underutilized, results from the faculty survey stated otherwise. Faculty responses indicated they used the school library for its course-specific resources and appreciated the opportunity to send students who needed help with support or resources beyond the online resources available. Faculty also indicated they desired laptops available for student usage (surprisingly, this was not something students rated highly). And faculty members appreciated the librarian's knowledge and willingness to collaborate with them.

Implementation

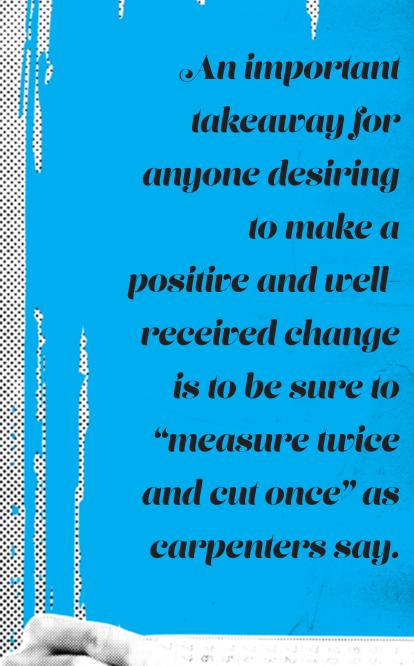
As a result of the first survey changes have already been made:

- · A laptop cart has been assigned to the school library (now referred to as the "media center") for in-library use. This resource draws more students to visit and allows them to use technology to complete projects. The laptops also promote collaborative work, something faculty members are expecting more often as new coursework is designed.
- Seating has been arranged in groupings, with a collaborative work zone, quiet work zone, and a reading zone. There are also floor seating pillows and beanbags for those students who work better in less formal seating. (This auxiliary seating is very popular,

- and students move it all over the school library!)
- Speakers were installed, and a variety of music is played throughout the day.
- Charging stations were purchased and strategically placed around the room, incidentally creating more opportunities for students to work collaboratively.
- The wall-mounted televisions were moved for greater opportunities for viewing, although they are currently used primarily for displaying school
- The print collection also underwent change to encourage more circulation. Graphic novels and manga were moved to the fiction section that had already been genre-fied. This move resulted in an increase in print circulation!

Sharing and Dissemination of Results

Although the action research project is in its second phase of "reflect, analyze, and implement," the initial success achieving the project goals has been noteworthy. Many schools as they struggle with increasing deficits and diminishing revenue look to consolidate and streamline services and personnel while addressing the influx of technology. Thus, an interest in library design and renovation is at the forefront of many school librarians' concerns as they strive to support the ubiquitous technology in education. Because of this interest, plans to share the results of this project included presenting within the state at the OELMA EduConference Innovative Learning Spaces in March 2015 and at AASL in November 2015.





Future Plans

Future plans include launching a survey in the fall to illuminate further facility design enhancements. The unveiling of the LIZ (Library Innovation Zone) space takes place this fall. It will be a high-tech area with additional tech tools and opportunities for videography, editing, Skype or Google Hangout sessions, studentled lunch and learn mini-lessons, and more as determined by the student steering committee created to design the space. The space exemplifies the district initiative of "student voice and choice" in learning opportunities and will provide the entire student and staff communities another way to implement this plan.

To build a wider scope of supporters, the next survey will solicit input from parents and other members of the community. Questions still to be answered include: How can parents and the greater community be reached most effectively? Are the most-effective means for outreach a stronger Web presence, interactive social media, or something else?

The greater community also includes district administration, curriculum leaders, and school board members. One more question remains: How can funding be obtained for further changes to make this flexible space even more responsive to the needs of its users? Ideally, the survey responses will contain some constructive ideas.

There are and will continue to be exciting changes at the Hilliard Bradley High School library, thanks in no small part to this collaboration between the school librarian and a professor who teaches pre-service librarians. The exchange of information and willingness of both parties to share their expertise was of benefit to all

involved. Liz's desire to implement well-considered change, as well as the benefit of a friendship, personal and professional, paved the way for creation of the action research plan and surveys.

Advice for Other School Librarians

An important takeaway for anyone desiring to make a positive and well-received change is to be sure to "measure twice and cut once" as carpenters say. Spend the time to research, question, collaborate, and discuss before beginning to develop a cohesive plan for change. Connect with others in the field of school librarianship. Two heads are better than one! Bring in your key stakeholders—faculty, students, administrators, and parentsbecause creating advocates for the library helps ensure that the school library is the hub of the school community and beyond.





Liz Deskins is the high school librarian at Hilliard (OH) Bradley High School. She is incoming president of the Ohio Educational Library Media Association and the coauthor (with Christina Dorr) of Linking Picture

Book Biographies to National Content Standards: 200+ Lives to Explore (Libraries Unlimited 2015). She is a member of AASL's 2015 National Conference Committee.



Burger, Sharon, and Mary Ann McFarland. 2009. "Action Research and Wikis: An Effective Collaboration." Library Media Connection 28: (2): 38–40.

Howard, Jody, and Su Eckhardt. 2006. "Leadership, Action Research, and the School Librarian." Colorado Libraries 32 (4): 61–62.



Meghan Harper is the coordinator of the school library media program at Kent State University and codirector of the Virginia Hamilton Conference on Multicultural Literature for Youth, the longest running national conference of its kind. She publishes research

in the area of school library facility design, assessment and evaluation, and information literacy. She is a member of AASL's Standards and Guidelines Implementation Task Force.